CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1.   A method for finding related nodes in a network, comprising:

pre-processing a degree of separation between each node in a plurality of nodes and at least a portion of each related node in the plurality of nodes, wherein the pre-processed degree of separation is less than a maximum degree of separation between a node and at least one related node in the plurality of nodes;

associating each pre-processed degree of separation with each respective related node for each node in the plurality of nodes;

receiving a request to determine a shortest path between the node and another node in the plurality of nodes;

employing the pre-processed degrees of separation associated with respective related nodes to determine if at least a portion of the shortest path between the node and the other node is pre-processed; and

if a complete shortest path between the node and the other node is determined to be no greater than the maximum degree of separation, providing the complete shortest path between the node and the other node based at least in part on the pre-processed degrees of separation associated with respective related nodes.

2.   The method of Claim 1, further comprising providing a limit for a number of degrees of separation that are pre-processed between the node and each related node in the plurality of nodes, wherein the limit is a fraction of the maximum degree of separation.

3.   The method of Claim 2, wherein the fraction of the maximum degree of separation for the limit is at least one of: one eighth, one quarter, one third, four eighths, one half, two thirds, three quarters, seven eighths.

4.   The method of Claim 1, further comprising if the pre-processed degrees of separation associated with respective nodes are employed to determine less than the complete

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shortest path, determining a remaining portion of the complete shortest path between the node and the other node.

5.   The method of Claim 1, wherein the network is at least one of a social network, heterogeneous network and a homogeneous network.

6.   The method of Claim 1, wherein the plurality of nodes in the network include at least one of a user, a friend, a relative, a classmate, a location, a resource, a contact, a domain, a message address, and a member.

7.   The method of Claim 1, wherein the pre-processing occurs prior to receiving the request for the path between the node and the other node.

8.   The method of Claim 1, further comprising if it is determined that the node and the other node are separated by more than the maximum degree of separation, indicating that the node and the other node are unrelated.

9.   The method of Claim 1, further comprising if it is determined that the other node is related to the node, employing the pre-processed degree of separation to provide the complete shortest path.

10.   The method of Claim 1, further comprising determining each related node that is common to at least two nodes in the plurality of nodes, wherein the common related node is employed to assist in determining the complete shortest path between the node and the other node.

11.   The method of Claim 1, wherein the maximum degree of separation is no greater than a largest degree of separation between the node and any another node in the plurality of nodes, and wherein the maximum degree of separation is selectable to be substantially less than the largest degree of separation.

12.   A server for finding related nodes in a network, comprising:

a memory for storing data; and

a processor that employs the stored data to perform actions, comprising:

pre-processing a degree of separation between each node in a plurality of nodes and at least a portion of the related nodes in the plurality of nodes, wherein the pre-processed degree of separation is less than a maximum degree of separation between a node and at least one related node in the plurality of nodes;

associating each pre-processed degree of separation with each respective related node for each node in the plurality of nodes;

receiving a request to determine a path between the node and another node in the plurality of nodes;

employing the pre-processed degrees of separation associated with respective related nodes are employed to determine if at least a portion of a shortest path between the node and the other node is pre-processed; and

if the shortest path between the node and the other node is determined to be no greater than the maximum degree of separation, providing a complete shortest path between the node and the other node.

13.   The server of Claim 12, wherein the actions further comprise providing a limit for a number of degrees of separation that are pre-processed between the node and each related node in the plurality of nodes, wherein the limit is a fraction of the maximum degree of separation.

14.   The server of Claim 13, wherein the fraction of the maximum degree of separation for the limit is at least one of: one eighth, one quarter, one third, four eighths, one half, two thirds, three quarters, seven eighths.

15.   The server of Claim 12, wherein the actions further comprise if the pre-processed degrees of separation associated with respective nodes are employed to determine less than the complete shortest path, determining a remaining portion of the complete shortest path between the node and the other node.

16.   The server of Claim 12, wherein the network is at least one of a social network, heterogeneous network and a homogeneous network.

17. The server of Claim 12, wherein the plurality of nodes in the network include at least one of a user, a friend, a relative, a classmate, a location, a resource, a contact, a domain, a message address, and a member.

18. The server of Claim 12, wherein the pre-processing occurs prior to receiving the request for the path between the node and the other node.

19. The server of Claim 12, wherein the actions further comprise if it is determined that the node and the other node are separated by more than the maximum degree of separation, indicating that the node and the other node are unrelated.

20. The server of Claim 12, wherein the actions further comprise if it is determined that the other node is related to the node, employing the pre-processed degree of separation to provide the complete shortest path.

21. The server of Claim 12, wherein the actions further comprise determining each related node that is common to at least two nodes in the plurality of nodes, wherein the common related node is employed to assist in determining the complete shortest path between the node and the other node.

22. The server of Claim 12, wherein the maximum degree of separation is no greater than a largest degree of separation between the node and any another node in the plurality of nodes, and wherein the maximum degree of separation is selectable to be substantially less than the largest degree of separation.

23. A client for finding related nodes in a network, comprising:

a memory for storing data; and

a processor that employs the stored data to perform actions, comprising:

enabling the pre-processing of a degree of separation between each node in a plurality of nodes and at least a portion of the related nodes in the plurality of nodes, wherein the pre-processed degree of separation is less than a maximum degree of separation between a node and at least one related node in the plurality of nodes;

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enabling the associating of each pre-processed degree of separation with each respective related node for each node in the plurality of nodes;

enabling the receiving of a request to determine a path between the node and another node in the plurality of nodes;

enabling the pre-processed degrees of separation associated with respective related nodes to be employed to determine if at least a portion of a shortest path between the node and the other node is pre-processed; and

if the shortest path between the node and the other node is determined to be no greater than the maximum degree of separation, enabling a complete shortest path between the node and the other node to be provided.

24.   The client of Claim 23, wherein the actions further comprise providing a limit for a number of degrees of separation that are pre-processed between the node and each related node in the plurality of nodes, wherein the limit is a fraction of the maximum degree of separation.

25.   The client of Claim 24, wherein the fraction of the maximum degree of separation for the limit is at least one of: one eighth, one quarter, one third, four eighths, one half, two thirds, three quarters, seven eighths.

26.   The client of Claim 23, wherein the actions further comprise if the pre-processed degrees of separation associated with respective nodes are employed to determine less than the complete shortest path, determining a remaining portion of the complete shortest path between the node and the other node.

27.   The client of Claim 23, wherein the network is at least one of a social network, heterogeneous network and a homogeneous network.

28.   The client of Claim 23, wherein the plurality of nodes in the network include at least one of a user, a friend, a relative, a classmate, a location, a resource, a contact, a domain, a message address, and a member.

29.   The client of Claim 23, wherein the pre-processing occurs prior to receiving the request for the path between the node and the other node.

30.   The client of Claim 23, wherein the actions further comprise if it is determined that the node and the other node are separated by more than the maximum degree of separation, indicating that the node and the other node are unrelated.

31.   The client of Claim 23, wherein the actions further comprise if it is determined that the other node is related to the node, employing the pre-processed degree of separation to provide the complete shortest path.

32.   The client of Claim 23, wherein the actions further comprise determining each related node that is common to at least two nodes in the plurality of nodes, wherein the common related node is employed to assist in determining the complete shortest path between the node and the other node.

33.   The client of Claim 23, wherein the maximum degree of separation is no greater than a largest degree of separation between the node and any another node in the plurality of nodes, and wherein the maximum degree of separation is selectable to be substantially less than the largest degree of separation.

34.   A carrier wave signal that includes data for performing actions, the actions comprising:

pre-processing a degree of separation between each node in a plurality of nodes in a network and at least a portion of the related nodes in the plurality of nodes, wherein the pre-processed degree of separation is less than a maximum degree of separation between a node and at least one related node in the plurality of nodes;

associating each pre-processed degree of separation with each respective related node for each node in the plurality of nodes;

receiving a request to determine a path between the node and another node in the plurality of nodes;

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employing the pre-processed degrees of separation associated with respective related nodes are employed to determine if at least a portion of a shortest path between the node and the other node is pre-processed; and

if a complete shortest path between the node and the other node is determined to be no greater than the maximum degree of separation, providing the complete shortest path between the node and the other node.

35.   The carrier-wave signal of Claim 34, wherein the actions further comprise providing a limit for a number of degrees of separation that are pre-processed between the node and each related node in the plurality of nodes, wherein the limit is a fraction of the maximum degree of separation.

36.   The carrier-wave signal of Claim 34, wherein the actions further comprise if the pre-processed degrees of separation associated with respective nodes are employed to determine less than the complete shortest path, determining a remaining portion of the complete shortest path between the node and the other node.

37.   The carrier-wave signal of Claim 34, wherein the network is at least one of a social network, heterogeneous network and a homogeneous network.

38.   The carrier-wave signal of Claim 34, wherein the plurality of nodes in the network include at least one of a user, a friend, a relative, a classmate, a location, a resource, a domain, a contact, a message address, and a member.

39.   The carrier-wave signal of Claim 34, wherein the actions further comprise if it is determined that the node and the other node are separated by more than the maximum degree of separation, indicating that the node and the other node are unrelated.

40.   The carrier-wave signal of Claim 34, wherein the actions further comprise if it is determined that the other node is related to the node, employing the pre-processed degree of separation to provide the complete shortest path.

41.   The carrier-wave signal of Claim 34, wherein the maximum degree of separation is no greater than a largest degree of separation between the node and any another

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node in the plurality of nodes, and wherein the maximum degree of separation is selectable to be substantially less than the largest degree of separation.

42.   An apparatus for finding nodes in a network, comprising:

a means for pre-processing a degree of separation between each node in a plurality of nodes and at least a portion of the related nodes in the plurality of nodes, wherein the pre-processed degree of separation is less than a maximum degree of separation between a node and at least one related node in the plurality of nodes;

a means for associating each pre-processed degree of separation with each respective related node for each node in the plurality of nodes;

a means for receiving a request to determine a path between the node and another node in the plurality of nodes;

a means for employing the pre-processed degrees of separation associated with respective related nodes are employed to determine if at least a portion of a shortest path between the node and the other node is pre-processed; and

a means for providing a complete shortest path between the node and the other node if the complete shortest path between the node and the other node is determined to be no greater than the maximum degree of separation.